

jc595 U.S. PTO

Please type a plus sign (+) inside this box →

PTO/SB/05 (4/98)  
Approved for use through 09/30/2000. OMB 0651-0032  
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE  
collection of information unless it displays a valid OMB control number.

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

*(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))*

Attorney Docket No.	E-1658
---------------------	--------

First Inventor or Application Identifier	David A. Holman et al
--	-----------------------

Title	Method and Apparatus for Packed Column.
-------	---

**Express Mail Label No.** EE797446574US

## APPLICATION ELEMENTS

*See MPEP chapter 600 concerning utility patent application contents.*

**ADDRESS TO:**

Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

1. ☒ \* Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Specification [Total Pages 33]  
(preferred arrangement set forth below)
- Descriptive title of the Invention
  - Cross References to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to Microfiche Appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 8]
4. Oath or Declaration [Total Pages 4]
- a. ☒ Newly executed (original or copy)
  - b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))  
(for continuation/divisional with Box 16 completed)
    - i. ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

5. ☐ Microfiche Computer Program (*Appendix*)
6. Nucleotide and/or Amino Acid Sequence Submission  
(*if applicable, all necessary*)
- a. ☐ Computer Readable Copy
- b. ☐ Paper Copy (identical to computer copy)
- c. ☐ Statement verifying identity of above copies

## ACCOMPANYING APPLICATION PARTS

7. ☒ Assignment Papers (cover sheet & document(s))  
8. ☐ 37 C.F.R. § 3.73(b) Statement ☒ Power of Attorney  
(when there is an assignee)  
9. ☐ English Translation Document (if applicable)  
10. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations  
11. ☐ Preliminary Amendment  
12. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)  
13. ☒ \* Small Entity ☐ Statement filed in prior application, Status still proper and desired  
(PTO/SB/09-12)  
14. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)  
15. ☐ Other: .....

\* NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:
- |                                       |                                     |   |                                |
|---------------------------------------|-------------------------------------|---|--------------------------------|
| <input type="checkbox"/> Continuation | <input type="checkbox"/> Divisional | <input type="checkbox"/> Continuation-in-part (CIP) | of prior application No: _____ |
|---------------------------------------|-------------------------------------|---|--------------------------------|

**For CONTINUATION or DIVISIONAL APPS only:** The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 17. CORRESPONDENCE ADDRESS

☐ *Customer Number or Bar Code Label*

or ☒ Correspondence address below

(Insert Customer No. or Attach bar code label here)

Name	Paul W. Zimmerman (K1-53)				
	Battelle Memorial Institute				
Address	P.O. Box 999				
City	Richland	State	WA	Zip Code	99352
Country	U.S.A.	Telephone	(509) 375-2981	Fax	(509) 375-4487

Name (Print/Type)	Paul W. Zimmerman	Registration No. (Attorney/Agent)	34,761
Signature	<i>Paul W. Zimmerman</i>	Date	28/OCT/23

**Burden Hour Statement:** This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

# FEE TRANSMITTAL

Patent fees are subject to annual revision on October 1.  
 These are the fees effective October 1, 1997.  
 Small Entity payments must be supported by a small entity statement,  
 otherwise large entity fees must be paid. See Forms PTO/SB/09-12.  
 See 37 C.F.R. §§ 1.27 and 1.28.

TOTAL AMOUNT OF PAYMENT (\$) 477.00

## Complete if Known

Application Number  
 Filing Date  
 First Named Inventor David A. Holman et al.  
 Examiner Name  
 Group / Art Unit  
 Attorney Docket No. E-1658

## METHOD OF PAYMENT (check one)

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

Deposit Account Number 02-1275  
 Deposit Account Name Battelle Memorial Institute Pacific Northwest Division

- ☒ Charge Any Additional Fee Required Under 37 C.F.R. §§ 1.16 and 1.17  
☐ Charge the Issue Fee Set in 37 C.F.R. § 1.18 at the Mailing of the Notice of Allowance

2. ☐ Payment Enclosed:  
☐ Check ☐ Money Order ☐ Other

## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
101 790	201 395	Utility filing fee	395
106 330	206 165	Design filing fee	
107 540	207 270	Plant filing fee	
108 790	208 395	Reissue filing fee	
114 150	214 75	Provisional filing fee	
SUBTOTAL (1)			(\$ 395.00)

### 2. EXTRA CLAIM FEES

Total Claims	Extra Claims	Fee from below	Fee Paid
20	-20** = 0		
5	-3** = 2	41	82
Multiple Dependent			

\*\*or number previously paid, if greater; For Reissues, see below

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
103 22	203 11	Claims in excess of 20	
102 82	202 41	Independent claims in excess of 3	
104 270	204 135	Multiple dependent claim, if not paid	
109 82	209 41	** Reissue independent claims over original patent	
110 22	210 11	** Reissue claims in excess of 20 and over original patent	
SUBTOTAL (2)			(\$ 82.00)

### 3. ADDITIONAL FEES

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
105 130	205 65	Surcharge - late filing fee or oath	
127 50	227 25	Surcharge - late provisional filing fee or cover sheet	
139 130	139 130	Non-English specification	
147 2,520	147 2,520	For filing a request for reexamination	
112 920*	112 920*	Requesting publication of SIR prior to Examiner action	
113 1,840*	113 1,840*	Requesting publication of SIR after Examiner action	
115 110	215 55	Extension for reply within first month	
116 400	216 200	Extension for reply within second month	
117 950	217 475	Extension for reply within third month	
118 1,510	218 755	Extension for reply within fourth month	
128 2,060	228 1,030	Extension for reply within fifth month	
119 310	219 155	Notice of Appeal	
120 310	220 155	Filing a brief in support of an appeal	
121 270	221 135	Request for oral hearing	
138 1,510	138 1,510	Petition to institute a public use proceeding	
140 110	240 55	Petition to revive - unavoidable	
141 1,320	241 660	Petition to revive - unintentional	
142 1,320	242 660	Utility issue fee (or reissue)	
143 450	243 225	Design issue fee	
144 670	244 335	Plant issue fee	
122 130	122 130	Petitions to the Commissioner	
123 50	123 50	Petitions related to provisional applications	
126 240	126 240	Submission of Information Disclosure Stmt	
581 40	581 40	Recording each patent assignment per property (times number of properties)	
146 790	246 395	Filing a submission after final rejection (37 CFR 1.129(a))	
149 790	249 395	For each additional invention to be examined (37 CFR 1.129(b))	
Other fee (specify)			
Other fee (specify)			
Reduced by Basic Filing Fee Paid			
SUBTOTAL (3)			(\$ -0-

## SUBMITTED BY

Typed or Printed Name Paul W. Zimmerman

Signature

Paul W. Zimmerman

Date

9/8/00/12

## Complete (if applicable)

Reg. Number 34,761

Deposit Account 005055

User ID

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Express Mailing Label # EE797446574US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
 )  
DA Holman, CJ Bruckner-Lea, )  
FJ Brockman, and DP Chandler )  
 )  
 )  
For: METHOD AND APPARATUS FOR ) Our Ref. No: E-1658  
PACKED COLUMN SEPARATIONS )  
AND PURIFICATIONS ) Date: October 23, 1998

CERTIFICATE OF MAILING

Box PATENT APPLICATION  
Commissioner of Patents and Trademarks  
Washington, DC 20231

Dear Sir:

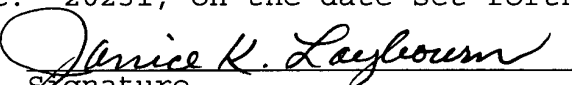
The undersigned hereby certifies that the attached:

- ☒ [ X ] Patent Application of 33 pages, and
- ☒ [ X ] Drawings of 8 Sheets
- ☒ [ X ] Fee Transmittal (2 ea.)
- ☒ [ X ] Assignment / Cvr. Sheet
- ☒ [ X ] Combined Declaration and Power of Attorney
- ☒ [ X ] Small Entity
- ☐ [ ] Information Disclosure
- ☐ [ ] with attachments

are being deposited with the United States Postal Service as:

- ☐ [ ] First Class Mail
- ☒ [ X ] Express Mail - Label #EE797446574US

in an envelope addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231, on the date set forth below.

  
Signature

10/23/98  
Date of Deposit

Janice K. Laybourn K1-53  
Intellectual Property Services  
Battelle Memorial Institute  
Pacific Northwest Laboratories  
P.O. Box 999  
Richland, WA 99352  
(509) 375-2655

09177902-102398